

**California Energy Commission**  
**RENEWABLE ENERGY PROGRAM**  
**Summary of Activities**  
**October 1, 2006 – December 31, 2006**

**RENEWABLE ENERGY PROGRAM**

***The Renewable Energy Program's (REP) goal is to achieve a self-sustaining renewable energy supply for California.***

**Renewables Portfolio Standard Program**

California RPS statutes require retail sellers to increase the renewable content of their electricity sales by at least 1 percent per year, with a goal of serving 20 percent of the state's retail electricity sales with renewables by 2010, made law in September with the enactment of Senate Bill 107 (Simitian), Chapter 464, Statutes of 2006. California's energy policy, set by Governor Schwarzenegger, expanded the goal to achieving 33 percent renewables by 2020 for the state as a whole. The RPS program sets goals that help inform the policies of the other programs in the Renewable Energy Program.

The Energy Commission and the California Public Utilities Commission (CPUC) jointly implement the RPS. The Energy Commission's roles are to certify renewable facilities as eligible for the RPS, distribute supplemental energy payments (SEPs) to cover above-market costs, and design and implement an accounting system to track and verify RPS compliance. The CPUC develops rules for and provides oversight of procurement activities.

Renewable generators that win a contract through an investor-owned utility's competitive solicitation may be eligible for SEPs from the Energy Commission. Eligible new or repowered facilities priced above the market price referent (MPR) may apply for SEPs from the Energy Commission to pay the difference between the contract price and the MPR. The Energy Commission may set a cap on the amount of SEPs it issues.

Following are RPS activities through December 31, 2006:

- Since the RPS policy was established in 2002, the state's investor-owned utilities — Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) — have conducted a number of renewable energy solicitations. From these competitive solicitations, and also through bilateral negotiations, the investor-owned utilities have signed contracts for 2,960 to 4,433 megawatts (MW) of new and existing renewable energy projects (range reflects build-out options). This includes 2,143 to 3,625 MW for new, repowered, or restarted renewable facilities, with 242 MW of these projects currently online. In terms of percentages, 7 to 11 percent of the capacity under contract for new, repowered, or restarted renewable facilities have begun operations (updated January 10, 2007).
- The Energy Commission released a staff draft of the revised *Renewables Portfolio Standard Eligibility Guidebook* on December 22, 2006. The Guidebook was revised in response to changes in law and regulatory and market developments. The Renewables Committee plans to hold a workshop to solicit public comments on the staff draft in January 2007. Following the workshop, public comments will be considered and incorporated into a Committee draft to be released during the next quarter.

## RPS CONTRACTS

This quarter, the investor-owned utilities executed contracts as a result of continuing negotiations from their 2004 and 2005 solicitations, and also executed various bilateral contracts.

### 2004

#### IOU RPS Solicitation

- On November 30, 2006, PG&E received CPUC approval for a new 20-year contract under its 2004 solicitation for 120 MW of new geothermal power (Resolution E-4022). PG&E filed its original advice letter on July 14, 2006 (Advice Letter 2860-E), which was withdrawn and resubmitted on October 30, 2006 (AL 2860-E-A). This contract is priced above the MPR and has applied for SEP eligibility.

### 2005

#### IOU RPS Solicitation

- On November 20, 2006, SDG&E filed an advice letter (Advice Letter 1845-E) for approval of four contracts totaling 138.8 MW of new capacity, including two 20-year contracts for 49.4 MW each of solar thermal capacity, a 20-year contract for 20 MW of biomass capacity, and a 15-year contract for 20 MW of geothermal capacity.
- On December 14, 2006, PG&E received CPUC approval for two contracts totaling a minimum of 79 MW (Resolution E-4041). PG&E originally filed an advice letter for the 20-year contracts for the new geothermal projects (one 49 MW and one 30-120 MW) on July 25, 2006 (Advice Letter 2863-E), which was resubmitted on November 30, 2006 (Supplemental Advice Letter 2863-E-A).

#### Bilateral

- On December 14, 2006, PG&E received CPUC approval for two bilateral contracts totaling 18 MW (Resolution E-4047). PG&E originally filed an advice letter for the 15-year contracts for two restart biomass projects in September 2005 (Advice Letter 2865-E), which was withdrawn and resubmitted on July 28, 2006 (Advice Letter 2865-EA) and November 13, 2006 (Supplemental Advice Letter 2865-EA).

### 2006

#### IOU RPS Solicitation

No contracts executed as of December 31, 2006.

#### Bilateral

- On October 3, 2006, PG&E filed an advice letter (Advice Letter U 39E) with the CPUC for approval of three 10-year bilateral contracts totaling 1.15 megawatts (MW) of capacity. These contracts include 1 MW of capacity from two new small hydro facilities and 0.15 MW from an existing biogas facility.
- On October 16, 2006, PG&E filed an advice letter (Advice Letter 2915-E) for approval of a 6-year bilateral contract with a 200 MW existing geothermal facility.
- On December 14, 2006, PG&E received CPUC approval of a 6-year bilateral contract for a 200 MW of existing geothermal capacity (Resolution E-4046). PG&E submitted an advice letter (Advice Letter 2915-E) on October 16, 2006, with Supplemental Advice Letter (2915-E-A) filed on November 2, 2006, and Substitute Sheet filed on November 6, 2006.

## **Western Renewable Energy Generation Information System (WREGIS)**

The Energy Commission is working with the Western Governors' Association, state and provincial representatives, and renewable energy market participants to design and implement an accounting system to verify compliance with California's RPS by retail sellers. WREGIS, a regional renewable energy tracking and registry system, will provide WREGIS Certificates to support verification of compliance with regulatory and voluntary renewable energy programs in the Western Interconnect.

- APX, Inc., the Software Development & Technical Operations contractor, commenced work to modify an existing generation tracking system for the purposes of WREGIS.
  - The WREGIS Project Team attended a kick-off meeting with APX at its headquarters in Santa Clara, California, on November 1, 2006.
  - The WREGIS Project Team and APX conducted meetings at the Energy Commission from November 7 to November 17 to discuss the functional requirements of the WREGIS System.
- WREGIS Administration
  - Philip Lusk, formerly an Emerging Technologies Analyst for the South Dakota PUC and a principal technical and analytical consultant for a variety of environmental and energy clients, began work as the WREGIS Administrator at WECC on November 6, 2006.
  - Andrea Coon, the WREGIS Assistant Administrator, and Mary Frantz, the WREGIS Program - Analyst, were hired in December 2006.
- The WREGIS Committee held regularly scheduled conference calls to discuss policy issues related to WREGIS.
- Heather Raitt gave a presentation on WREGIS at the National Association of State Energy Officials meeting on September 12, 2006, in Seattle, Washington.
- Rasa Keanini gave a presentation on WREGIS at the National Renewable Energy Marketing Conference on December 6, 2006, in San Francisco, California.
- The Energy Commission estimates that WREGIS will be operational in mid-2007.
- WREGIS expenditures this quarter:
  - Enterprise Networking Solutions contract for \$193,200 for the services of a Senior Project Manager consultant for the WREGIS project: Expended \$51,348.
  - Visionary Integration Professionals contract for \$198,000 for the services of a Program Development Project Manager consultant for WREGIS: Expended \$40,635.
  - Personal Enterprises, Inc. contract for \$115,200 for the services of a Quality Assurance/ Configuration Management Consultant for WREGIS. The QACM ensures APX performs the appropriate quality assurance and user acceptance testing, and all WREGIS documentation undergoes version control and adequate storage: Expended \$28,560.

## **New Renewable Facilities Program (NRFP)**

The NRFP fosters the development of new in-state renewable electricity generation facilities by providing financial support. The program consists of two components:

1. Production incentives (cents per kWh payments for renewable energy generated) for proposed projects were allocated to the lowest bidders during three competitive solicitation processes, per SB 90. Production incentives are paid over a five-year period once a project begins electricity production.
  - Incentive payments totaling approximately \$1.89 million were made during this quarter.
  - Approximately \$112 million is encumbered for participating auction winners.

- Forty-seven<sup>1</sup> projects are currently online and producing electricity, representing 488 megawatts of new renewable energy capacity.
  - Since its inception in June 1998, the NRFP has paid a total of over \$67 million in production incentives to 47 new renewable generating facilities for 7,248 gigawatt-hours of generation.
  - During this quarter, one project funded by the NRFP reached the end of its five-year collection period, and the project account was closed:
    - Lincoln Power Plant, REN-01-059, ID 50059
2. Production incentives, referred to as SEPs, are provided to cover above-market costs of meeting the RPS, subject to certain cost constraints. If an eligible facility secures a power purchase agreement with a retail seller through a competitive solicitation, it may apply for SEPs.
- The Energy Commission received a SEP application for a geothermal project at the Newbury Volcano facility under contract with PG&E. The application was accompanied by requests for confidentiality from the applicant and from PG&E for supplemental information required with the application. Staff requested additional information from the applicant. Once the application is complete and the requests for confidentiality are approved by the Energy Commission, the Renewables Committee will consider the application and may issue a funding confirmation letter for part or all of the funding requested. A SEP application submitted previously by Esmeralda-Truckhaven Geothermal has been withdrawn.

## Emerging Renewables Program (ERP)

The ERP provides consumers of electricity in investor-owned utility service territories with a rebate incentive to offset the cost of purchasing and installing new renewable energy systems at their homes and businesses. Reduced purchase costs encourage manufacturers and retailers to expand operations and reduce costs to consumers. Incentive payments are based on the rated electrical capacity of the system.

Through 2006, eligible technologies were solar photovoltaic, small wind, fuel cells using renewable fuels, and solar thermal electric. Effective 2007, only small wind systems (rated output of 50kW or less) and fuel cells (using a renewable fuel) are eligible. The California Solar Initiative (CSI), discussed below, has replaced the solar components of both the Energy Commission's ERP and the CPUC's Self-Generation Incentive Program.

- On November 6, 2006, a Renewables Committee workshop was held at the Energy Commission to solicit comments from interested parties on the staff draft *Emerging Renewables Program Guidebook, Eighth Edition*. This Guidebook responded to legislative direction and removed the following elements from the ERP: photovoltaic (PV) and solar thermal electric technologies, the Pilot Performance-Based Incentive Program, the Solar Schools Program, and the New Housing sections.
- The Energy Commission subsequently adopted the *Emerging Renewables Program Guidebook, Eighth Edition* as part of its regularly scheduled Business Meeting on December 13, 2006. This Guidebook describes the requirements for receiving incentives, beginning January 1, 2007, to install eligible small wind and fuel cells systems using renewable fuels.
- During this quarter, payments totaling \$14.6 million were made for 1,072 installed systems, representing 5.2 MW of capacity.
- Approximately 3,800 reservation requests were received for about 22 MW of capacity.
- Payments to date total \$317 million for 21,700 systems representing approximately 92 MW of distributed generation capacity.
- Funds encumbered for 5,400 systems total \$86 million, representing 31.1 MW of capacity.

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<sup>1</sup> The Wintec #2 wind project was split into two projects, but in order to maintain consistency with previous years, it will continue to be reported as one project.

- Updated public information concerning the ERP continued to be made available on the Energy Commission's website.

### **Status of ERP funding as of December 31, 2006:**

- In December 2006, the program experienced a spike in rebate applications as customers anticipated the replacement of the ERP's solar component by the CSI beginning January 1, 2007. More than 2,700 applications were received in December. This compares to 3,300 PV and wind rebate applications received during June 2006 (due to a July 1, 2006 drop in the rebate level)—a record amount of program participation for any given month.
- ERP funding under SB 1038 concluded at the end of December. This legislation authorized the expenditure of investor-owned utility ratepayer funds collected from 2002 through 2006.
- In recognition of the ongoing customer demand for ERP funds, additional financial support was legislated in 2004 by AB 135, an urgency statute. This legislation authorized the use of \$60 million of future ERP funds to be collected from 2007-2011.
- SB 1250, Statutes of 2006, has authorized the use of funds collected from 2007 through 2011. However, this legislation's ERP dollars are targeted for use by the Energy Commission's New Solar Homes Partnership program, an element of the California Solar Initiative.
- Based on an estimate of the funds necessary to approve all rebate applications submitted through December 31, 2006, staff and the Energy Commission's Renewables Committee will be recommending the reallocation of \$31,500,000 Renewable Resource Trust Fund dollars to the ERP. This will allow the ERP to continue making reservations and payments for the purchase and installation of renewable energy systems, to avoid major market and funding disruptions, and ensure adequate funding for all applications currently submitted.

#### **– Pilot Performance-Based Incentive Program**

This pilot program began in January 2005 as a possible long-term option for building the PV market in California. With a budget of \$10 million, the program offers a rebate level of \$0.50 per kWh based on the energy production of the installed solar PV system. The initial reservation period is one year to install the PV system. Quarterly performance payments are made over a three-year period.

- Ten systems representing 361 kW of capacity are installed and receiving quarterly payments.
- As of December 31, 2006, funds encumbered for 26 approved applications represent \$6.8 million and 2.3 MW of additional potential capacity.

#### **– Affordable Housing Program**

Solar PV systems installed on affordable housing projects and meeting defined criteria are offered rebates 25 percent higher than the standard ERP rebate, not to exceed 75 percent of the system cost.

- During this quarter, payments of \$448,000 were made to 17 affordable housing projects.
- \$3.4 million remains reserved for 194 projects pending completion.
- The Affordable Housing Program represents 593 kW of installed renewable electrical capacity for 209 systems as of December 31, 2006 .

#### **– Solar Schools Program**

In May 2004, the Solar Schools Program offered \$4.5 million in incentives to eligible public and charter schools for the installation of PV systems. Over thirty schools have been selected to receive the higher rebate – participants receive double the current ERP rebate – and awardees claim their rebate when their PV system is fully installed and operational. The Solar Schools Program is currently closed and all funds have been awarded. The program is funded equally by

the Energy Commission's Emerging Renewables Program (\$2.25 million) and the California Attorney General's Alternative Energy Retrofit Account (\$2.25 million).

- Within this reporting period, the program paid \$191,276 to one school for 29.99 kW of installed solar capacity.
- To date, 23 schools have completed the installation of their PV projects, with an additional 10 schools in various stages of project completion.
- By the end of the quarter, payments totaled \$3.14 million for over 500 kW of solar capacity.

– **California Solar Initiative/New Solar Homes Partnership (NSHP)**

The CSI is a \$3.35 billion solar incentive program to be administered by the CPUC, Energy Commission, and publicly-owned utilities from 2007 through 2016. The CPUC is responsible for providing incentives to the nonresidential and existing residential markets, and the Energy Commission's NSHP program will offer incentives to encourage solar installations in the residential new construction market within the investor-owned electric utility service areas. The CSI will replace the solar components of both the Energy Commission's ERP and the CPUC's Self-Generation Incentive Program.

- On October 5, 2006, a Renewables Committee workshop was held at the Energy Commission to solicit comments from interested parties on the staff draft *New Solar Homes Partnership Guidebook*.
- On November 6, 2006, another Renewables Committee workshop was held at the Energy Commission to solicit comments from interested parties on the revised staff draft *New Solar Homes Partnership Guidebook*.
- A NSHP Advisory Committee meeting was held November 9, 2006 in which members and participants had an opportunity to collaborate and exchange views on the Committee draft *New Solar Homes Partnership Guidebook* and the PV Calculator.
- On December 13, 2006, the Energy Commission adopted the final *New Solar Homes Partnership Guidebook* (Guidebook). This Guidebook describes the requirements for receiving incentives to install eligible solar photovoltaic systems on energy efficient, solar homes under the NSHP.
- An NSHP Affordable Housing Advisory Committee Meeting was held on December 15, 2006 at the Energy Commission. The focus of the meeting provided members and participants with an opportunity to exchange ideas on staff-developed proposals on the implementation of the affordable housing component of the NSHP.
- On December 22, 2006, the final NSHP Guidebook was made publicly available and posted on the GOSOLARCALIFORNIA web site.

Expenditures for the NSHP support contracts are reported under their funding source, the Consumer Education Program.

## **Existing Renewable Facilities Program (ERFP)**

This program provides production incentives of up to 1.5 cents per kilowatt-hour to biomass, solar thermal, and wind facilities. Incentive payments are tied to market prices, with no payments made if the market price is above a predetermined target price.

- During this period, about \$7.2 million in payments were made for 1,230 GWhs of generation for October through December 2006.
- To date, payments totaling \$244 million have been made to existing facilities for generation from January 1998 through December 2006.
- ERFP rollover funds — those remaining after payments have been made and rolled over to the next payment cycle as available funds — total \$11.9 million.
- 378 facilities are registered as renewable suppliers, with 102 eligible for funding from the ERFP.



- The Energy Commission released a staff draft of the revised *Existing Renewable Facilities Program Eligibility Guidebook* on December 22, 2006. The Guidebook was revised in response to changes in legislation. The Renewables Committee plans to hold a workshop to solicit public comments on the staff draft in January 2007. Following the workshop, public comments will be considered and incorporated into a Committee draft to be released during the next quarter.

## Consumer Education Program

This program awards grants and contracts to increase public awareness of renewable energy and its benefits, and to help build a consumer market for renewable energy and small-scale emerging renewable technologies.

- A grant agreement for \$50,000 was developed with the Rarus Institute for the Solar Decathlon 2005 project. The Solar Decathlon was a competition among 18 colleges and universities from around the globe, featuring team-designed and built solar homes, and held on the National Mall in Washington, D.C. in October 2005. The Rarus Institute was tasked with developing the educational element of the project – a video and book. The Solar Decathlon 2005 DVD was shown at the American Solar Energy Society (ASES) Solar 2006 conference held in Denver on July 7-13, 2006. On September 25, final deliverables of the Solar Decathlon 2005 book were submitted to the Energy Commission. In addition, a revised copy of DVDs was submitted which included bonus features such as a 10-minute segment of Kids Environmental Action Network (KEAN) interviewing college students involved with the decathlon. A copy of the DVD was also sent to KCET (L.A. based PBS station). Expended \$50,000 for final invoice.
- The Clean Energy States Alliance (CESA) is a multi-state collaboration of public clean energy funds and state agencies working to develop and promote clean energy technologies and expand the market for these technologies. The three-year contract is for \$240,000 (\$80,000 per year). Expended \$80,000 for annual membership fee.
- New Solar Homes Partnership contract activities:
  - A contract with Propose for \$105,000 was approved on November 28, 2006. The contractor will assist the NSHP with developing partnerships with builders and other stakeholders.
  - The Edelman contract is a three-year marketing and outreach effort to encourage the installation of solar electric systems on new housing. Encumbered \$1,299,399 for year one of the contract.
- Consumer Education Program payments to the KEMA technical support contractor during this quarter consisted of the following:
  - New Solar Homes Partnership development activities:
    - Field verification activities, eligibility issues of PV system components, and NSHP Guidebook support: Expended \$18,629.
    - Affordable housing characteristics' paper, workshop attendance and support: Expended \$11,690.
  - WREGIS development activities:
 

Technical advice and assistance to staff in reviewing and drafting issue briefs on Project Issue Requests was provided in addition to the following: attendance and support for WREGIS committee and sub-committee meetings; periodic updates to the website including posting notes, agendas, etc.; correspondence with stakeholders regarding questions about WREGIS; compilation of stakeholders' comments and working with staff on a proposed fee structure; research on eligible renewables fuels for WREGIS states. Expended \$22,679.
- Consumer Education disbursements since the beginning of the program total over \$5.89 million.